

AMENDMENTS TO THE CLAIMS:

Please cancel claims 1-12 and 17-20 without prejudice.

Please amend claims 13-16 and 21-24, as follows.

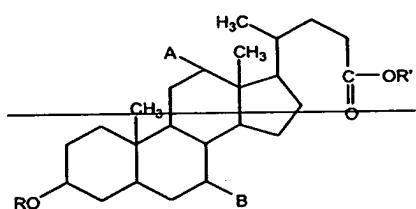
Please add new claims 25-28, as follows.

Claims 1-12 (Canceled)

13. (Currently Amended) A resist flow process for forming a photoresist pattern comprising the steps of:

(a) forming a first photoresist pattern on a substrate using a photoresist composition comprising a photoresist polymer, a photo acid generator, an organic solvent, and an additive of following Formula 1 selected from the group consisting of compounds of following Formulas 3 to 7:

Formula 1



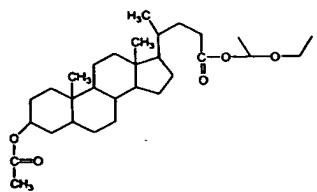
wherein, A is H or OR'',

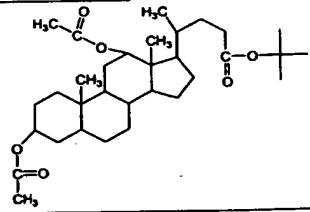
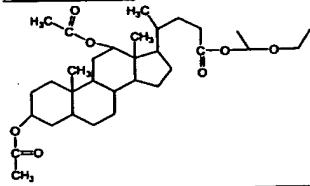
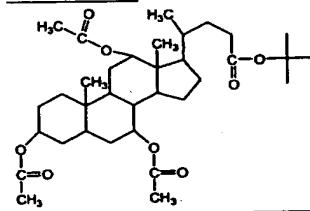
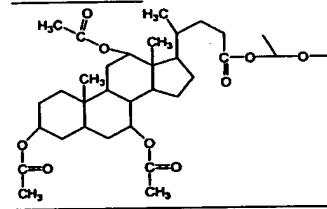
B is H or OR''', and

R, R', R'' and R''' are independently selected from the group consisting of C₁-C₁₀ alkyl, C₁-C₁₀ alkoxyalkyl, C₁-C₁₀ alkylcarbonyl, and C₁-C₁₀ alkyl containing at least one hydroxyl group (OH),

and

Formula 3



Formula 4Formula 5Formula 6Formula 7

and

(b) producing performing a resist flow process onto the first photoresist pattern to obtain a second photoresist pattern from said first photoresist pattern using a resist flow process.

14. (Previously Presented) The resist flow process according to claim 13, wherein said step (a) further comprises the steps of:

- (i) coating said photoresist composition on said substrate to form a photoresist film, wherein said substrate is a semiconductor device; and
- (ii) producing said first photoresist pattern using a lithography process.

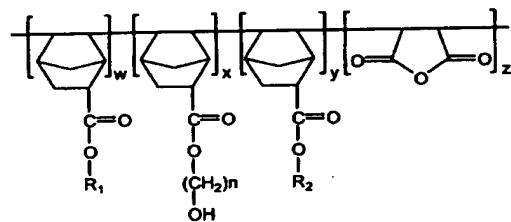
15. (Previously Presented) The resist flow process according to claim 13, wherein said first and second photoresist pattern comprises a contact hole pattern.

16. (Previously Presented) The resist flow process according to claim 13, wherein said resist flow process comprises heating said first photoresist pattern ~~to temperature in the range of from 120 to 190°C up to Tg of the photoresist~~.

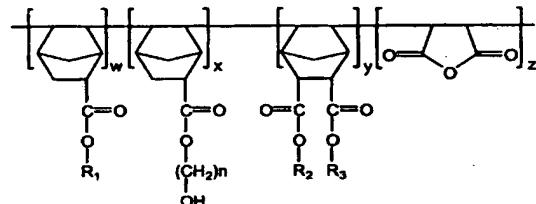
Claims 17-21 (Canceled)

22. (Currently Amended) The resist flow process according to claim 13, wherein said photoresist polymer is a compound of following Formulas 8 or 9:

Formula 8



Formula 9



wherein, R1 is ~~and~~ an acid labile protecting group;

R2 is hydrogen;

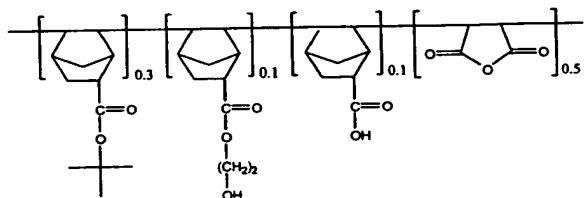
R3 is ~~hydrogen~~, selected from the group consisting of hydrogen, C₁-C₁₀ alkyl, C₁-C₁₀ alkoxyalkyl, and C₁-C₁₀ alkyl containing at least one hydroxyl group (-OH);

n is an integer from 1 to 5; and

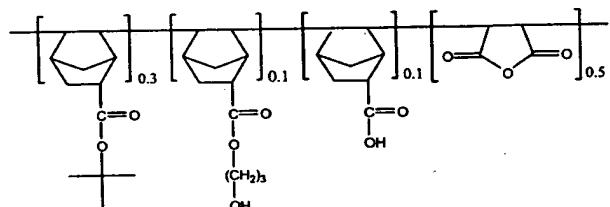
~~w, x, y and z individually denote the mole ratio of each monomer, preferably with proviso that w + x + y [[=]] is 50mol%, and z is 50mol%.~~

23. (Currently Amended) The resist flow process according to claim 13, wherein said photoresist polymer is selected from the group consisting of compounds of at least one of the following Formulas 10 to 13:

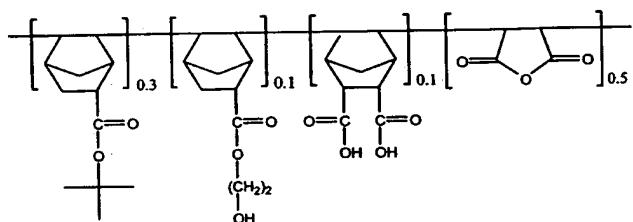
Formula 10



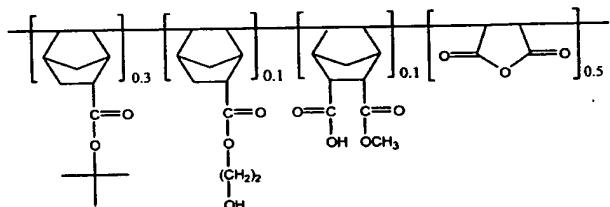
Formula 11



Formula 12



Formula 13



24. (Currently Amended) The resist flow process according to claim 13, wherein said additive is present in an amount ranging from 1 to 70wt% by weight of the photoresist polymer.

25. (New) The resist flow process according to claim 13, wherein said photoacid generator is selected from the group consisting of diphenyl iodide hexafluorophosphate, diphenyl iodide hexafluoroarsenate, diphenyl iodide hexafluoroantimonate, diphenyl p-methoxyphenyl triflate, diphenyl p-toluenyl triflate, diphenyl p-isobutylphenyl triflate, diphenyl p-tert-butylphenyl triflate, triphenylsulfonium hexafluorophosphate, triphenylsulfonium hexafluoroarsenate, triphenylsulfonium hexafluoroantimonate, triphenylsulfonium triflate, dibutylnaphthylsulfonium triflate, and mixtures thereof.

26. (New) The resist flow process according to claim 13, wherein said photoacid generator is present in an amount ranging from 0.01 to 10% by weight of the photoresist polymer.

27. (New) The resist flow process according to claim 13, wherein said organic solvent is selected from the group consisting of propyleneglycol methyl ether acetate, ethyl lactate, methyl 3-methoxypropionate, ethyl 3-ethoxypropionate and cyclohexanone.

28. (New) The resist flow process according to claim 13, wherein said organic solvent is present in an amount ranging from 100 % to 1000% by weight of the photoresist polymer.